

DOCUMENT RESUME

ED 395 136

CE 071 513

AUTHOR Polson, Cheryl J.
TITLE Teaching Adult Students. IDEA Paper No. 29.
INSTITUTION Kansas State Univ., Manhattan. Center for Faculty Evaluation and Development in Higher Education.
PUB DATE Sep 93
NOTE 7p.
AVAILABLE FROM Center for Faculty Evaluation and Development, Kansas State University, 1615 Anderson Avenue, Manhattan, KS 66502-4073 (For current prices call 1-800-255-2757).
PUB TYPE Information Analyses (070)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Adult Learning; *Adult Students; Classroom Techniques; *College Students; Higher Education; *Student Characteristics; Student Motivation; *Teaching Methods

ABSTRACT

Although adult learners are similar to their younger classmates in many ways, they have some particular characteristics that have implications for teaching them. For example, adults have multiple roles, and classes sometimes cannot be their first priority. Adults also have more life experiences, which can provide foundations for learning or create barriers to learning, and they may be at transition points in their lives. Other characteristics of adults are as follows: most are "off-campus" directed, they have no experience or no recent experience with higher education, they have clearer educational goals, and they are more likely to be paying for their education. The following are implications of these characteristics for teaching adults: (1) courses must meet adult students' specific needs; (2) knowing the backgrounds of students is important; (3) adult students are very task oriented, expecting to apply their learning immediately; (4) it is important to help students integrate new information with information they may already have; (5) adults may react defensively if their belief systems are challenged; (6) students need transition time to focus on and absorb new information; (7) the aging process may rob students of some of their short-term memory and reaction time--teaching strategies should take into account learning styles and progress at a speed at which students can master the material; and (8) adult students need more opportunities for success--therefore, information should be broken into manageable units, various techniques should be used, and a positive learning environment of which adults feel a part must be created. (Contains 31 references.) (KC)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

iDEA PAPER NO. 29

center for
FACULTY
EVALUATION &
DEVELOPMENT
Division of Continuing Education
Kansas State University

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as
received from the person or organization
originating it.

☐ Minor changes have been made to
improve reproduction quality.

• Points of view or opinions stated in this
document do not necessarily represent
official OERI position or policy.

Teaching Adult Students

Cheryl J. Polson
Kansas State University

September, 1993

PERMISSION TO REPRODUCE AND
DISSEMINATE THIS MATERIAL
HAS BEEN GRANTED BY

W. C. Ashen

TO THE EDUCATIONAL RESOURCE
INFORMATION CENTER (ERIC)

We all know who adult learners are. They are the students who sit in the front row of class; the ones who remember when John F. Kennedy was president; the ones who get mad when the instructor doesn't show up for class; and they are the ones whose favorite sweatshirt is older than some of their classmates.

Is the "adult learner" a recognizable, single entity for whom there is one best way to teach, or for whom there is one best way to learn? No. There is no agreement in the literature as to what constitutes an adult learner. Is it someone who is eligible to vote? Is it a 25 year old graduate student who still lives with his or her parents? Is it someone who works full time? Is it someone who has been away from a formal learning environment for more than two years? Rather than trying to develop a single definition of the "adult learner," I would like to begin by briefly discussing the key variables which might differentiate adult learners from the 18-22 year old student. In reality, adults possess characteristics that are both similar and dissimilar to traditional, 18-22 year old learners. In my opinion, the teaching techniques advocated by adult educators are also effective with traditional age students.

Characteristics of Adult Learners

Since there is no single definition of what an adult learner is, there can be *no universal* statements about what characterizes all adult learners. However, it is possible to describe *some general attributes*.

Multiple Roles

Adult students are engaged in multiple roles which impact both the time and the energy they can devote to their role as student. Unlike many younger students, college is *not* a full-time occupation for them. Instead it is often a secondary role to that of being a parent, a spouse, an employee and/or a community leader. Frequently a return to campus requires a reordering of the adults' life so that the demands of this additional role may be successfully integrated into an already complex life. Although—as instructors—we hope (and often assume) that school is their top priority, it is not. **These non-academic interests and commitments must be recognized—and at times honored.** For example, if an adult student misses a scheduled exam because he or she must take a sick child to the doctor, it would be unreasonable for the instructor not to provide an alternative opportunity for this student to take the exam. Adulthood, unfortunately, requires many decisions where students have to prioritize their obligations, and class will not always come out on top.

More Life Experiences

Having lived longer, adults usually bring more life experiences to the classroom than the younger student. These experiences can be a double-edged sword. **Frequently their experiences provide a rich resource for learning and a foundation upon which to build new knowledge,** enabling adult students to apply what they are learning in class to their own experiences. **In other instances, these experiences can create barriers to learning.** Adults' attitudes, values, and beliefs are established as a result of their experiences. When these experiences are in conflict with what is presented in class, they must be encouraged to remain open and flexible to other views. Learning for adults frequently involves "a process of reaffirming, reorganizing, and reintegrating one's previous experiences" (Smith, 1981, p. 36).

Varied Developmental Tasks

Developmentally, traditional students and adult students have at least one thing in common. They are both groups of **people who are at a transition point in their lives.** Adult development theory (Gould, 1978; Levinson, 1978) indicates that adults move through a series of developmental stages which include periods of transitions accompanied by periods of stability. Theorists suggest that each of these developmental stages presents *unique developmental tasks* which must be addressed. Traditional students are dealing with the transition from late adolescence to young adulthood—a well defined stage of adult development. Thus, as part of the same age cohort, they are going through the same stage together. All are dealing with the same issues and problems that make up the developmental tasks of this stage. "It is so simple, in one sense, to work with students of age 18-22, who are often full time and in residence. They have a commonality of age, of commitment, of developmental issues, and of continual interaction with the university environment" (Kasworm, 1988, March).

Adult students, ranging from age 25-65 and over, come to higher education while in a *variety* of developmental stages. **In any given class, there are likely to be students either moving in, moving through, or moving out of many different life transitions.** It is often these life transitions and developmental issues which have triggered their return to education (Asianian & Brickell, 1988).

Successful teachers of adults understand how these developmental issues may impact the adult learner in the classroom. For example, between 35 and 45 adults often start to question life's meaning and become aware that

ED 395 136

CK 091513

their time is finite. Adult students at this stage not only want *their learning to be relevant*, but also *are often interested in exploring alternative career and life roles*. Instructors who provide insights into how the course work might provide vehicles for change will serve such students particularly well. It is equally important for us as instructors of adults to be aware of our own developmental tasks, and to be sensitive as to how the developmental issues we are confronting might impact our relationships with students.

Other Characteristics

There are other characteristics which sometimes distinguish the adult learner from younger students, but which are not as clear cut. These characteristics may be dependent upon the type of institution or differences among students. For example, **most adults are off-campus directed**. They are less concerned with on-campus activities than are the traditional-aged student. Adults find their support and service network in the community surrounding the institution, while traditional-aged, especially residential, students, often rely heavily on campus based student services.

Frequently adult students either **have had no experience with higher education, or the experience has not been recent**. In either case, they may have problems adjusting to the college/university setting (e.g., where to park), with understanding academic procedures (e.g., how to drop/add a course), developing study skills (e.g., how to study for exams), or locating needed resources (e.g., financial aid). Adult students often are reluctant to seek help, or wait until it is too late. Frequently instructors are the adult students only lifeline to the campus and are often called upon to provide information which traditional students obtain from student affairs personnel.

Adult students are often described in the literature as having established **clearer educational goals** prior to their entry into higher education, unlike the traditional-aged student who is frequently portrayed as wandering for several years prior to developing his or her educational agenda. An equally debatable characteristic is the financial commitment adults may have to their degree completion. **Adults are more likely to be paying for their education** and their decision to seek education is often at the expense of something or someone else, e.g., the family vacation or perhaps the new family car.

In summary, adult students with their multiple roles, their extensive experiences, and their varied developmental tasks, provide a new challenge for the college instructor whose teaching experience has been limited to traditional-aged students. Teaching approaches that younger, undergraduate students might tolerate are frequently rejected by the older, adult students. Numerous books have been published describing effective teaching strategies for adult learners (see References and Suggested Readings at the end of this paper). The remainder of this paper will briefly describe some implications to be considered when designing and delivering college-level instruction to adult learners.

Implications for Teaching Adults

Must Meet Specific, Identified Needs

Adults frequently seek higher education in response to an identified need to gain a specific skill or knowledge. **They want to know how the course work will meet their needs**. Adult students will want to know what will be

accomplished in the course. They will expect a detailed course syllabus that outlines the goals and objectives the instructor has set for the class. Given this, **it is imperative that instructors learn very early why each student enrolled in the course**. Instructors can find this out fairly easily by asking students to complete some kind of student information form. Questions like "Why are you taking this course?" and "How do you hope to use what you learn in this course?" might be included.

When surveying the students, instructors might also **gather additional background information**. For example, how familiar is the student with the subject matter, and what attitudes and opinions does the student have about the subject matter? Possible questions might be "Have you had a previous course in the subject matter (e.g., perhaps a course taken at another institution which was not transferable)?", or "Have you had on-the-job-experience that relates to the subject?" Questions about how the student learns best (e.g., does he or she like to work in small groups, like lectures, prefer independent study) can also be included to give some clues about the students' learning preferences.

Alternative exercises have been suggested as ways to gather information about the backgrounds of students. For example, ask the students to write a brief autobiography which includes their experiences with the course topic; or—if class size permits—interview each student. Regardless of what techniques are used, it is critical that we instructors take into account not only *our* learning goals for the course, but also *the goals of the students and their backgrounds and learning preferences*.

Assistance with Everyday Tasks

While it is probably safe to say that learners of any age learn best when they are able to apply learning to everyday situations, many older students feel like "time is running out." They are *not* satisfied knowing that *someday* they might use the information presented. **Adult students are very task oriented, wanting and expecting their learning be applicable to problems with which they are being confronted daily**.

There are some simple ways this can be accomplished in the classroom. For example, instructors can ask students to write **case studies based on situations the students have confronted on the job**, then use these cases in class. A **panel of previous graduates** discussing how they have applied the course information in their work can also be very effective. **Assignments that have students interview a professional in the field** and integrate what was said with the course material is also an effective way to transfer classroom learning to the "real world." Two discipline-specific examples: in chemistry, design experiments that students can conduct at home; in foods and nutrition, have students figure out the nutritional value of the foods they eat on a regular basis. Obviously, the subject matter will determine the way in which the course material can be related to everyday life, but it can often be accomplished if this need for applicability is considered when planning the course.

Experiences Impact Teaching and Learning

As discussed earlier, the life experiences which adult learners bring to the classroom should not be overlooked. When instructors ignore adult students' experiences, it can be viewed as a rejection of them as individuals. The students' experiences should be built upon and considered

throughout the entire course. Remember that learning for adults involves a constant reorganization and restructuring of information. **The difficulty is not learning something new, it is in relating it back to what has been previously learned.** To teach adults effectively, it is important to explore whether or not they have established a mind set that will impact their learning.

When presenting information that is new to the student, it is important to help them integrate the new information with information they have already acquired. Instructors should use a variety of teaching techniques—not just lecturing—to utilize and build on the students' experiences. Active participation by the students is critical to accomplishing this task. When students are involved, they are more likely to explore alternative ways to think about the subject as well as think of alternative skills to complete the task. As a result, critical thinking skills are enhanced. One active teaching technique is having students **role play situations that they have confronted.** Another is **large and small group discussions** in which adult students are encouraged to share relevant experiences. **Posing questions** to students can further encourage this integration. Questions might include: "How does this compare with what you have seen or done?" "What might prevent this from working?" "Have you experimented with this before?" "When might this technique fail?" Equally effective is the instructor's sharing examples from his or her own practice. The use of **analogies and metaphors** can also be extremely useful in helping students integrate new and old knowledge.

Adults have learned many things informally through on the job training, through talking with friends, through observation, and through trial and error. This does not mean they have learned everything completely, or even correctly, but it does mean that **adults have developed some preconceptions.** The implications of these preconceptions for teaching can be immense. When the information that the instructor presents conflicts with a student's preconception, learning can be delayed or distorted. Instructors must balance the respect for the students' opinions with encouraging the broadening of views and expansion of skills.

Occasionally adult students will react emotionally and become defensive when "their truths" are questioned. This interferes with learning. Students exhibit defensiveness in a number of ways, including challenging the instructor—which can be especially threatening to inexperienced teachers. Brookfield describes this as a normal part of the learning rhythm. Learners experience what Brookfield (1990, p.52) terms "incremental fluctuations." He suggests that learners take two steps forward and one step backwards in all learning situations. A learning event is initiated with a sense of exhilaration. However, as new ways of thinking and acting are presented, the learner may become anxious and will retreat back to old, familiar ways. But, once they get "back home," the learner finds it just is not the same any more. They find they are no longer comfortable with their old assumptions. As a result, they gather new energy and take another step forward. It is important for instructors to be cognizant of these "highs and lows" in the student's learning experience.

Understanding that this is a normal pattern of learning will help the instructor anticipate and cope with student anger or resistance to the new learning. Instructors can assist learners in this process by demonstrating how what they are presenting is similar or dissimi-

lar to the student's frame of reference. When teaching a course requiring the development of skills that adult students have already performed—but in a way different from what the instructor is advocating—the following is a useful technique. Let the student demonstrate how he or she performs the task, and then have the task performed in the new manner, pointing out the similarities and differences in the two techniques. It is very important to give students time to absorb the new information or technique. Learning events create change and can be unsettling. The most powerful learning reported by students often involves their giving up some long held assumptions—learning which made them confront their assumptions. To assist students through this process they will often need to have time to "grieve for their lost certainties" (Brookfield, 1990, p. 46).

When presenting information which requires new skills and knowledge, **students need transition time to focus on and absorb new information.** For example, returning adult students who are entering a new curriculum may require greater transition time. If they were originally enrolled in a hard science curriculum where many answers are perceived to be black and white, they may have difficulty dealing with the ambiguity found in some of the social science curriculums. They will also need time to adjust to the new terminology used. Instructors need to allow students time for reflecting upon what they have learned. This can be encouraged by a number of in-class activities. For example, students can be asked to **keep a learning journal** in which they record reflections upon the various class sessions. Instructors may want to leave time at the end of the class for students to write their journal entries. These journals can then be collected periodically throughout the class to provide the instructor with feedback as to how the class has been experienced by the learners. **"One minute papers"**, a teaching technique suggested by Angelo and Cross (1993) can also provide the instructor with clues as to whether or not the student has been able to integrate the new information presented. One approach to doing a "one minute paper" is to ask students to take one minute at the end of class to write down what was the one most important thing they learned during the class session, or one remaining question they have about the day's topic. Reading over these short papers can help instructors assess the degree to which students understood the lecture; they also give the student an opportunity to reflect on the new information. The instructor can use the questions raised in these papers as clues for what they need to clarify in the following class period and a way to summarize what was covered in the previous class session.

Consequences of Aging Process on Learning

It was not until 1928 that adults were believed to be capable of learning (Thorndike et al., 1928). Research has continued to support that adults are able to learn, but that **the aging process does impact learning needs.** Adults may have experienced a decline in vision, a decline in reaction time, or a decline in short-term memory. There are a number of ways in which classroom facilitators can help these learners compensate for the effects of aging. For example, **use large print** on overheads—and printed materials if possible—to assist those with declining vision. Select a well-lighted classroom if one is available. **Employ both audio and visual formats** to accommodate learners who may have visual or hearing impairments. For example, provide a handout outlining the key concepts to be presented in a class lecture, or in a video or audio tape, prior to the instruction. When lecturing, instructors should **not speak too fast nor too softly.** Looking for students'

non-verbal expressions of confusion can give clues as to when something has not been fully heard or understood. During question and answer time, instructors may have to repeat the questions posed by other class members to ensure all learners have benefited from the discussion.

Older and younger students differ most in their reaction time. Traditional-age students have a tendency to complete assigned tasks quickly, but with limited attention given to accuracy. Adult students will want to take their time and do it right. This difference in orientation may be due to the fact that adults operate in environments where accuracy is critical and where mistakes are seldom tolerated.

Given the low quality of many multiple-choice tests, **older students may perform poorly on timed, multiple-choice tests** due to their concern for accuracy (Birren, 1974; Craik & Salthouse, 1992). This situation is further exacerbated by paradoxes which their broader life experiences create when trying to select *the one, best answer*. When instructors use such tests to measure students' progress, they may be testing the adult students' reaction time, not their level of learning and comprehension.

The effects of slower reaction time may also be seen when adult students are asked to perform **tasks requiring psychomotor skills**. Not only are they concerned about looking foolish but it may take them longer to perform a task. Instructors need to provide ample time for such tasks to be accomplished.

Use a variety of ways to measure student learning.

This not only allows for different learning styles, but also provides a more accurate measure of adult and traditional-age students' learning. For example, use short essay exams, self-directed learning projects designed and implemented by learners, simulation-games, peer teaching, or field interviews.

As students grow older, they tend to experience some short-term memory loss. Instructional points can be made more memorable by appealing to a variety of senses (e.g., visual, auditory) in class and by making concepts relevant, linking them to the students' experiences. Variety and relevance can be further enhanced by allowing students to *directly apply* the information presented. For example, have them work on a case study, conduct an experiment, or practice the skill. Providing students with clues as to how the material may be organized and retained will be especially helpful to adult students. A long-established, effective teaching technique—which also helps students to remember—is to begin each class with an overview of what was presented from the previous session.

Every course has some material that is more complex, more difficult for students to understand. Students can learn best when the instructor **progresses at the speed students can follow**. Faculty easily forget that the students are often novices in the discipline; they may not be well versed in the topic nor do they all share our passion for the subject matter. Forgetting this frequently results in the instructor moving through the material so fast that students are lost at some point along the way. **It is better to cover less material but have it understood and retained, than to cover too much with little retention.** A useful analogy someone suggested when deciding on what content must be delivered is to think of a target. The bulls eye contains information which the learner "must know." The inner ring is the "important to know" ring. The

outer ring represents information that may be "interesting to know," but which is *not central* to the students' understanding. Information which might fall into either of the outer rings could be supplied to the learner in the form of a handout or supplemental reading.

Here are some guidelines to follow when presenting information which is complex and difficult for students to absorb. These are particularly important when teaching introductory courses which might be the adult students' *first* course. Sometimes lacking confidence in their ability, **adult students may need more opportunities for success** which accompany these steps. The guidelines include: 1) **break information into manageable units**, 2) **condense large problems into smaller units with progressive steps**, 3) **move from simple concepts that students understand to complex concepts**, 4) **repeat information frequently**, and 5) **give clues as to how the student might organize the material**.

The following is an example of how the above might be achieved. When teaching a section on the philosophy of education in a required education course, an instructor might do the following:

1. In order to make the philosophies relevant to everyday practice, have the students complete a paper and pencil inventory with 15 items, each presenting a teaching situation and five options of how an instructor might react. Each option reflects a different philosophy. The student chooses the option that best reflects how he or she might react. This helps the students assess which philosophy they are most likely to use in practice.
2. Give clues as to how the students might outline or organize the assigned readings into similar categories.
3. During the class lecture, have students complete a matrix with the various philosophies along one dimension, and key concepts—such as the role of the teacher, the role of the learner, the instructor's theory of teaching, teaching methods utilized—along the other. The students then have to fill in the boxes with the appropriate material from the lecture.
4. At the end of presenting each of the educational philosophies, a current day example of that philosophy is discussed. Short video or audio tapes (e.g., a key writer who operates from that philosophy might be interviewed) that can be used to supplement the lecture will further enhance the learners' comprehension.
5. Assign additional readings that illustrate that philosophy in action.
6. Once all the philosophies have been covered in class, give the students case studies. They have to suggest how a particular philosophical orientation might be used to solve the problem described in the case.

This is just one example of how complex material can be organized to facilitate the learners' comprehension. These concepts can be used as guidelines for almost any curriculum.

Create A Positive Learning Environment

It is not uncommon for adult students to feel insecure in the student role. Many experience the "imposter syndrome," frequently doubting their ability to succeed (Brookfield,

1990, p. 44). They report that they feel as though everyone else knows more than they do—that there is little they can contribute to the class. For some, this imposter feeling is further compounded by the negative experiences that they have had with the educational system. Those experiences have often left the students feeling that they were failures, and so many have low self-concepts. Keeping these potential psychological barriers in mind, **instructors should provide support and encouragement when asking students to try new skills.** Establish a positive learning climate where adults feel comfortable.

Effective teachers of adults go out of their way to **ensure a non-threatening learning climate where learners feel free to take risks and try new skills.** This climate is established during the first course session and continues throughout the entire course. There are a variety of techniques by which this can be accomplished (see Pratt, 1984). A simple climate setting exercise where one class member interviews another member and later introduces that person, including some personal information, can be very effective. Large enrollments do not have to preclude this type of activity (see Draves, 1984). For example, the instructor might assign students to small groups in which this activity is conducted.

Adult learners need to feel a part of a learning community—a support network of learners who provide both encouragement to fellow students and serve as a sounding board for their anxieties and self doubts (Brookfield, 1990). **Providing a class roster** with the other students' names, addresses and phone numbers (with student consent, of course) can be a mechanism by which the learning community can be facilitated. Students may be encouraged to form student support networks through the **assignment of small group projects** or study groups.

A positive climate is fostered when the instructor shares some personal information about himself or herself, is friendly, authentic, human, honest, informal, open, and respectful. Instructors who are more interested in their subject matter than in helping students understand the subject will have a difficult time establishing a positive learning environment.

Also important to a good learning climate is **the physical environment.** Although instructors may not be able to do anything about environmental conditions such as noise, temperature, and lighting, they may be able to **alter seating arrangements** to encourage student involvement and discussion. Experiment by teaching one course session with the seats arranged in neat rows (as is in most high school or elementary school settings) and a following class session arranged in a way that students can see and easily interact with one another—for example a circle or a u-shape.

By using the suggestions given in this paper it is hoped that college instructors can help adult students—in all their many varieties—learn more effectively. The suggestions will probably help traditional-age students—in all their many varieties—learn more effectively also.

References and Suggested Readings

For the reader who may have limited time to read on this topic, the following are especially recommended: Brookfield (1990), Galbraith (1990, or 1991), or Wlodkowski (1985).

- Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers* (2nd ed.). San Francisco: Jossey-Bass.
- Apps, J. W. (1981). *The adult learner on campus: A guide for instructors and administrators*. New York: McGraw-Hill.
- Apps, J. W. (1991). *Mastering the teaching of adults*. Malabar, FL: Krieger.
- Aslanian, C. B., & Brickell, H. J. (1988). *How Americans in transition study for college credit*. New York: College Board.
- Birren, J. E. (1974). Translations in gerontology—from lab to life: Physiology and the speed of response. *American Psychologist*, 29, 808-815.
- Brookfield, S. (1986). *Understanding and facilitating adult learning*. San Francisco: Jossey-Bass.
- Brookfield, S. (1987). *Developing critical thinkers: Challenging adults to explore alternative ways of thinking and acting*. San Francisco: Jossey-Bass.
- Brookfield, S. (1990). *The skillful teacher*. San Francisco: Jossey-Bass.
- Chickering, A. W. & Associates. (1985). *The modern American college. Responding to the new realities of diverse students and a challenging society*. San Francisco: Jossey-Bass.
- Craik, F. I. M., & Salthouse, T. A. (1992). *The handbook of aging and cognition*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cranton, P. (1988). *Planning instruction for adult learners*. Toronto: Wall & Thompson.
- Daloz, L. A. (1986). *Effective teaching and mentoring: Realizing the transformational power of adult learning experiences*. San Francisco: Jossey-Bass.
- Draves, W. A. (1984). *How to teach adults*. Manhattan, KS: Learning Resource Network.
- Eble, K. (1988). 2nd. Ed. *The craft of teaching: A guide to mastering the professor's art*. San Francisco: Jossey-Bass.
- Galbraith, M. W. (1990). *Adult learning methods: A guide for effective instruction*. Malabar, FL: Krieger.
- Galbraith, M. W. (1991). *Facilitating adult learning: A transactional process*. Malabar, FL: Krieger.

Gould, R. (1978). *Transformations: Growth and change in adult life*. New York: Simon & Schuster.

Hiemstra, R. & Sisco, B. (1990). *Individualizing instruction*. San Francisco: Jossey-Bass.

Kasworm, C. (1989, March). *Acceptance speech: Outstanding contribution by a faculty member award*. Paper presented at the meeting of the American College Personnel Association, Miami, FL.

Knowles, M. S. (1980). *The modern practice of adult education. From pedagogy to andragogy*. New York: Cambridge University Press.

Levinson, D. J. (1978). *The seasons of a man's life*. New York: Knopf.

McKeachie, W. J. (1978). *Teaching tips: A guidebook for the beginning college teacher*. Lexington, MA: Heath & Company.

Merniam, S. B. & Caffarella, R. A. (1991). *Learning in adulthood*. San Francisco: Jossey-Bass.

Mezirow, J. (1981). A critical theory of adult learning. *Adult Education*, 32, (1), 3-24.

Pratt, D. D. (1984). Teaching adults: A conceptual framework for the first session. *Lifelong Learning: The Adult Years*, 7, 6, 7-9, 28, 31.

Schlossberg, N. K., Lynch, A. Q., & Chickering, A. W. (1989). *Improving higher education environments for adults. Responsible programs and services from entry to departure*. San Francisco: Jossey-Bass.

Schon, D. A. (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.

Smith, R. M. (1981). *Learning how to learn. Applied theory for adults*. Englewood Cliffs, N.J.: Cambridge Adult Education, Prentice Hall Regents.

Thorndike, E. L., Bregman, E. O., Tilton, J. W., & Woodyard, E. (1928). *Adult learning*. New York: Macmillan.

Wlodkowski, R. J. (1984). *Motivation and teaching: A practical guide*. Washington, DC: National Education Association.

Wlodkowski, R. J. (1985). *Enhancing adult motivation to learn. A guide to improving instruction and increasing learner achievement*. San Francisco: Jossey-Bass.

IDEA PAPERS

IDEA Papers may be ordered from the Center. Individual copies are \$1.00. Bulk orders of the **same** paper: 25-99 copies are 25 cents per copy; 100 or more copies are 20 cents per copy. Orders less than \$50.00 must be prepaid.

IDEA Papers: Complete Set (contains 20 or more Papers still in print) **\$10.00. Prices effective through June 30, 1994.**

- No. 1: **Motivating Students**. Cashin
- No. 3: **Improving Academic Advising**. Grites
- No. 4: **Classroom Observation Techniques**. Acheson
- No. 5: **Using Simulation Games in the College Classroom**. Hyman
- No. 7: **A Guide to Clinical Performance Testing**. Whitman
- No. 8: **Questioning in the College Classroom**. Hyman
- No. 9: **Teaching Decision-Making With Guided Design**. Wales and Nardi
- No. 13: **The Feedback Lecture**. Osterman, Christensen, and Coffey
- No. 14: **Improving Lectures**. Cashin
- No. 15: **Improving Discussions**. Cashin and McKnight
- No. 16: **Improving Multiple-Choice Tests**. Clegg and Cashin
- No. 17: **Improving Essay Tests**. Cashin
- No. 18: **Matching Instructional Objectives, Subject Matter, Tests, and Score Interpretation**. Hanna and Cashin
- No. 19: **Improving College Grading**. Hanna and Cashin
- No. 20: **Student Rating's of Teaching: A Summary of the Research**. Cashin
- No. 21: **Defining and Evaluating College Teaching**. Cashin
- No. 22: **Student Rating's of Teaching: Recommendations for Use**. Cashin
- No. 23: **Improving Students' Listening Skills**. Newton
- No. 24: **Improving Instructors' Speaking Skills**. Goulden
- No. 25: **Improving Student Writing**. Smit
- No. 26: **Improving Student Reading**. Maleki and Heerman
- No. 27: **Writing a Syllabus**. Altman and Cashin
- No. 28: **Periodicals Related to College Teaching**. Cashin and Clegg
- No. 29: **Teaching Adult Students**. Polson